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ABOUT HOLLIES

Finetooth Holly, *Ilex serrata* (Thunb.)

Since mid September a small bush with bright red fruit has been attracting attention in the geographical section of the Arboretum near the Bald Cypress planting. Its berries suggest holly, and although the leathery evergreen foliage usually associated with the genus *Ilex* is lacking, the showy fruit is a giveaway clue as to its identity. For, our subject is the little known Finetooth Holly, a deciduous species from Japan and China first introduced into this country in 1866. Some similarity to our native Winterberry, *Ilex verticillata*, is evident in its general appearance, although closer inspection will reveal numerous botanical differences. For one thing, it is smaller in every detail—flowers, foliage and berries. Its angular young shoots covered with a fine pubescence are different, too, as is the dainty symmetrical foliage with its impressed veins and even, finely toothed margins. Individual leaves vary from 1 to 3 inches in length and up to an inch or so wide, are narrowly oval to obovate in shape and tapered at both ends. They are thinner than most *Ilex*.

While the Arboretum specimen is immature and less than six feet tall, the bush has a potential maximum of 15 ft., a height regarded as above average. A narrow, extremely erect growth habit is typical of younger Finetooth Hollies, but age results in wider spreading branches and a gradual broadening of the overall outline.

Apparently as hardy as the Winterberry and quite as free fruiting, it is known for its complement of tiny ($\frac{3}{8}$ in. diameter) berries produced on short stalks in the axils of the leaves, either solitary or in clusters of 2 or 3. They are darker colored and tenacious. The flowers, like those of so many hollies, are inconspicuous.

As a landscape subject the Finetooth Holly is perhaps too slow growing for general use, but the plant connoisseur will find it an interesting species to try.

Smooth Winterberry, *Ilex laevigata* (Gray)

There are those who consider the Smooth Winterberry a better shrub than its more familiar relative, the Black Alder (*I. verticillata*), an

opinion which may or may not be borne out by a comparison of the two. With us this Winterberry, while a lower growing (5 ft. now, 10 eventually) broader spreading bush with larger berries, lacks the Black Alder's free fruiting quality, to us its most important landscape feature. Clear yellow fall foliage color does compensate to a degree, however.

As would be expected, smoothness is an identifying characteristic of both twigs and leaves of *Ilex laevigata*. Elliptical, oval or sometimes lanceolate in shape, the bright green leaves ($1\frac{1}{2}$ to 3 inches long, $\frac{1}{2}$ to $1\frac{1}{4}$ inches wide) are thin and leathery and exhibit considerable glossiness. A fine serration marks their margins.

Little need be said of the yellowish inflorescences other than to mention that the staminate (male) flowers occur singly or in twos in axillary clusters, while the pistillate (female) are solitary. The fruit following is about a third of an inch in diameter and borne on short pedicels. It persists as long as birds leave it alone.

With a more restricted range than the Black Alder, the Smooth Winterberry is an inhabitant of lowlands from Maine and New Hampshire south to Pennsylvania and Virginia.

Bosley Hedgeholly, *Ilex opaca* "Bosley Hedgeholly"

Of the evergreen hollies one of the most promising for the Chicago region is this hardy selection of American Holly introduced some years ago by the Bosley Nursery of Mentor, Ohio. Referred to as a "20° below zero holly", its performance record at the Arboretum has proved its ability to cope with local climatic conditions.

While the common name infers that the plant is essentially a hedging material, such is not the case, for when permitted to develop naturally it will grow into a dense, closely branched specimen with a minimum of pruning. A number of isolated examples may be seen within the Arboretum grounds as well as a clipped hedge of it in the outer section of the Hedge Garden. It stands shearing very well.

Stiff, very thick foliage spaced close together on the twigs is the most conspicuous Hedgeholly feature. One notices, too, that the leaf margins are curved, recurved and twisted, and marked at intervals with spines extremely sharp to the touch. The leaves themselves are rather petite, varying in size from $1\frac{1}{2}$ to $2\frac{1}{4}$ inches long and up to $1\frac{1}{4}$ in width. Their coloring is a rich green, dark above, lighter below.

Typical holly berries, globose in shape and up to one third of an inch in diameter provide the festive note one expects of hollies in fall and winter. Both they and the foliage are pleasingly arranged on stout gray twigs.

Old Heavyberry American Holly, *Ilex opaca* "Old Heavyberry"

Arboretum specimens while still too immature to verify the appropriateness of the common name by which this fine native holly is known, are nevertheless sufficiently large to show the plant's exceptional vigor and to demonstrate the substance and boldness of its handsome dark green leaves. Their thickness and leathery texture is a noticeable feature as is

the high lustre marking their upper surfaces. Statistically the leaves are of good size, varying from $2\frac{3}{4}$ inches in length to 2 in width. They are elliptic to oval in shape, and flat or slightly keeled with sharp acuminate apices, obtuse bases and shallowly undulate margins. Short petioles support them.

As would be expected, the fruit display is regarded as the tree's ultimate achievement. Our young plants have only hinted as to the eventual beauty to be expected from Old Heavyberry in full bearing, but the size ($\frac{1}{3}$ " diameter) and dark red coloring of the firm berries borne one to a pedicel leaves little to the imagination.

The original tree of Old Heavyberry is in Burlington, New Jersey, where it was found and introduced by Mr. Earle Dilatush, holly specialist of Robinsville, New Jersey. It has always been rated as one of the best of the "*opaca*" clones, not only on an ornamental basis but also because of its hardiness and ability to retain good color under adverse winter conditions.

Some holly growing tips

Like the Ericaceous plants most of the evergreen hollies require special treatment if they are to succeed in this area. And, while a suitable growing medium is perhaps the most important basic requisite, selection of a planting site affording the proper exposure, protection and drainage is equally necessary.

Proper exposure under local conditions means planting to avoid contact from winter sun, especially in early morning, and shelter from drying southwest summer winds and northwestern winter ones. A north or northeast exposure is most ideal. The more sunlight the bushier the plant, however, although a richer green foliage color prevails in shade.

As hollies thrive best in a neutral or acid soil, it is advisable to provide a special planting mixture for them. We have found one consisting of equal parts of leaf mold, peat moss, woods loam and lake sand ideal. A continuous mulch of oak leaves or peat will also prove beneficial, as will fertilization at intervals with decomposed manure. Poultry droppings are excellent for the purpose.

Watering is also important, especially during dry periods when a regular irrigation schedule should be followed. It is also essential to see that the plants do not go into the winter dry. Rain water is preferable in every instance to local well water due to the high alkalinity of the latter. Even softened water is not as good.

Newly planted hollies or established plants in exposed positions will benefit from spraying with Wilt-Pruf, a protective coating effective in preventing excessive transpiration. Applications may be made both in fall and spring.

Another tip for holly planters. Being dioecious, the male and female flowers are produced on separate plants, necessitating the presence of both to insure fruit production. One staminate to three pistillate plants is the suggested ratio.

E. L. Kammerer



Old Heavyberry American Holly, *Ilex opaca* "Old Heavyberry" in Arboretum Center Grounds.

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